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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,421	06/30/2000	Thomas A. Tetzlaff	884.279US1	9595

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EXAMINER	
BRODA, SAMUEL	
ART UNIT	PAPER NUMBER
2123	

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/607,421	TETZLAFF, THOMAS A.	
	Examiner	Art Unit	
	Samuel Broda	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 16-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 16-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 August 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *June 2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to Applicant's Amendment and Response Under 37 CFR § 1.111 mailed on 15 June 2004. Claims 21-24 were amended; claims 7-15 were canceled; claims 1-6 and 16-25 are pending.

Claim Rejections - 35 U.S.C. § 101

2. The following is a quotation of 35 U.S.C. 101:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2.1 Claims 21-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

2.2 Regarding independent claim 21, this claim recites in-part: "An article having a computer readable medium, the computer readable medium comprising a **data structure describing** a device model for use in a simulator, . . ." (Emphasis added.) The remainder of the claim does not define any structural and functional interrelationships between the computer readable medium and a computer that permits the article's functionality to be realized.

In response to the first rejection under Section 101, Applicant amended claim 21 to indicate the data structure is for use during a "computerized operation of the simulator." The claim is still directed to a data structure and the amended language does not express a relationship between the computer and data structure that is more than a data structure used to

initialize a simulator. Therefore, claim 21 represents non-statutory descriptive material; see MPEP Section 2106, subsection IV.B.1(a).

2.3 Claims 22-25 are dependent on claim 21 and rejected using the same analysis.

Claim Rejections - 35 U.S.C. § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> . . .
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.1 Claims 1-6 and 16-25 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Smith, "Set-and-See Switch-Level Simulation for VLSI Functional Verification," IEEE 39th Midwest Symposium on Circuits and System, Vol. 1 pp. 402-405 (August 1996).

3.2 Smith teaches the combination of the "Magic" VLSI layout editor with the "Esim" switch-level simulator. See pages 402-3. Name and geometry attributes for each node in a circuit are stored in a table and initially unknown values are "painted" on all nodes but power and ground. The user then sets values to one or zero; see page 404 column 1 paragraphs 3-4.

3.3 Regarding claims 1-3 and 5, the user operating the "Set-and-See" simulator conditionally treats unknown node input states as known values when initializing the simulation,

evaluates the resulting output nodes by using the "known" input states, including by setting one or more input nodes as a "0."

3.4 Regarding claims 5 and 6, Smith also teaches use of the "Set-and-See" simulator to model a CMOS inverter including a switch-level model of a transistor, including detecting an X on the input node and evaluating the output node to a "1"; this result occurs by definition when the user sets the input node to "0." Similarly, the detection of on X on the input node and then evaluating the output node to "0" occurs by definition with the user sets the input node to "1." See "SCMOS Inverter" pages 404-5 starting at column 2 paragraph 5.

3.5 Regarding claims 16-25, these claims are anticipated using the analysis of claims 1-6 above, in conjunction with the "logging file" that permits the user to conditionally treat unknown input nodes. See "Modifications to the Simulator" pages 403-4 starting at column 2 paragraph 5.

Applicant's Arguments

3.1 Applicants argue at pages 5-6 of the Amendment that amended claims 21-25 properly "expresses the interrelationship between a computer and the data structure that permits the functionality of the data structure to be realized."

3.2 Applicants additionally argue at pages 6-7 of the Amendment that the claim rejections under Section 102 are inappropriate because "Smith does not show a responsive

connection between what the Office Action calls the attributes of Smith and the user setting a node to a 0 or 1."

Examiner's Reply

4. The Examiner respectfully disagrees for the following reasons:

4.1 Regarding the rejections under Section 101, the Examiner's reply appears in the rejection above at Section 2.2. The claim preamble indicates Applicant is attempting to claim a "data structure describing a device model" and while the amended claim language asserts the use of the data structure during a computerized operation of the simulator, this assertion does not make the structure functionally descriptive.

4.2 Regarding the rejections made under Section 102, under the broadest reasonable interpretation of the claims consistent with the Specification, a user operating the "Set-and-See" simulation accesses the attributes of the simulation model and responsive to the attributes, sets input node states. Such an accessing step followed by a responsive step naturally occurs during the initialization of the "Set-and-See" simulator, and Applicant's claims include no language distinguishing how further action is taken responsive to the attribute.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

7. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Samuel Broda, whose telephone number is (571) 272-3709. The Examiner can normally be reached on Mondays through Fridays from 8:00 AM – 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kevin Teska, can be reached at (571) 272-3716. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist, whose telephone number is (703) 305-3900.

SAMUEL BRODA, ESQ.
PRIMARY EXAMINER